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 CRUCIBLE MATERIALS CORPORATION

SUPERIOR COURT OF THE STATE OF CALIFORNIA  
 FOR THE COUNTY OF ORANGE

ORANGE COUNTY WATER DISTRICT,

Plaintiff,

v.

NORTHROP CORPORATION; NORTHROP  
 GRUMMAN CORPORATION; AMERICAN  
 ELECTRONICS, INC.; MAG AEROSPACE  
 INDUSTRIES, INC.; GULTON INDUSTRIES,  
 INC.; MARK IV INDUSTRIES, INC.; EDO  
 CORPORATION; AEROJET-GENERAL  
 CORPORATION; MOORE BUSINESS  
 FORMS, INC.; AC PRODUCTS, INC.;  
 FULLERTON MANUFACTURING  
 COMPANY; FULLERTON BUSINESS PARK  
 LLC; and DOES 1 through 400, inclusive,

Defendants.

AND RELATED CROSS ACTIONS.

Case No.: 04CC00715

Assigned to Hon. Kim G. Dunning  
 Department CX104

**DEFENDANT CRUCIBLE MATERIALS  
 CORPORATION'S CLOSING BRIEF  
 AND [PROPOSED] FINDINGS OF  
 FACTS AND CONCLUSIONS OF LAW**

Trial Date: February 10, 2012  
 Complaint Filed: December 17, 2004

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1 Defendant Crucible Materials Corporation (“CMC”) hereby submits its Closing Brief and  
2 Proposed Findings of Fact and Conclusions of Law, as a supplement to the Defendants’ Closing  
3 Trial Brief on Common Issues.

4 The above-entitled case came on regularly for trial before the Court on February 10, 2012  
5 in Department CX-104, Judge Kim G. Dunning presiding. Plaintiff Orange County Water  
6 District (the “District”) was represented by its counsel, Duane C. Miller and Michael D. Axline  
7 of Miller, Axline & Sawyer, and Edward Connor of Connor, Fletcher & Williams LLP.  
8 Defendant Crucible Materials Corporation was represented at the trial by its counsel, Paul D.  
9 Rasmussen of Dongell Lawrence Finney LLP. Prior to commencement of trial, the District’s  
10 case was bifurcated such that the first phase of the trial involved the District’s first cause of  
11 action for violation of the Orange County Water District Act (the “OCWD Act”), its second  
12 cause of action for violation of Health and Safety Code section 25363 (“HSAA”), and its sixth  
13 cause of action for declaratory relief.

14 The Court heard testimony of percipient and expert witnesses and received documents  
15 into evidence, including deposition testimony excerpts. The Court, having considered the  
16 evidence and heard the arguments of counsel, including the parties’ briefs and all supporting  
17 documents, and having evaluated the demeanor and credibility of the witnesses, makes the  
18 following findings of facts and conclusions of law.

19 **I. INTRODUCTION**

20 Defendant Northrop, among others, filed a cross-complaint against CMC on or about  
21 August 19, 2005. Shortly thereafter, on or about November 2, 2005, the District filed an  
22 amendment to its First Amended Complaint substituting CMC for Doe 104. The District brought  
23 its claims against CMC without any evidence of releases of volatile organic compounds  
24 (“VOCs”) to the groundwater at its former site at 2100 E Orangethorpe Avenue, Fullerton,  
25 California (the “Site,” “Crucible Site” or “2100 E. Orangethorpe Site”). The District included  
26 the Site within its 2008 VOC plume map even though it had no groundwater data at or near the  
27 Site. It wasn’t until early 2011 that the District, through its retained expert Dr. Waddell,  
28 conducted any groundwater sampling at or near the Site when it installed four one-time only

1 groundwater grab samples. Not only are these four samples inadequate to support a connection  
2 between the Site and downgradient groundwater contamination, the District failed to rebut strong  
3 evidence that the adjacent Vista Paint site is the likely source of the groundwater contamination.

4 The District's case against CMC is based entirely upon the four one-time groundwater  
5 grab samples taken in early 2011. However, these one-time sampling events, as opposed to the  
6 use of monitoring wells, are unreliable for purposes of adequately determining whether a site has  
7 impacted groundwater because:

8 (1) They are nothing more than a snapshot in time of groundwater conditions at a site;

9 (2) They are not reproducible;

10 (3) They are not indicative of past groundwater conditions or trends;

11 (4) They do not measure groundwater levels and flow at a site over time;

12 (5) They do not measure horizontal and vertical conditions at a site;

13 (6) They serve merely as a screening tool; and

14 (7) They are not accepted by California regulatory agencies as the sole method for  
15 determining whether a site has in fact impacted groundwater.

16 Three experts in this matter, including the District's causation expert, have opined that such one-  
17 time testing is of limited use and not helpful in detecting a pattern in groundwater quality.

18 After filing its claim against CMC in November 2005, the District had over six years to  
19 conduct a deep soil investigation at the Site and/or install groundwater monitoring wells at or  
20 near the Site in an effort to support its claims that the Site has impacted or threatens groundwater  
21 with VOC contamination, but it did not do so.

22 The California Department of Toxic Substances Control ("DTSC") and the Regional  
23 Water Quality Board ("RWQCB"), agencies charged with the protection of the environment and  
24 California's water resources, would not accept the results of a one-time groundwater sampling  
25 event to determine whether a site is impacting groundwater. In the face of multimillion dollar  
26 claim against CMC for groundwater cleanup, neither should this Court accept such speculative  
27 evidence.

1 In contrast to Dr. Waddell's conclusion based on insufficient evidence, the Toxic  
2 Substances Control Division of the California Department of Health Services ("DHS"),  
3 RWQCB, U.S. Environmental Protection Agency, Region IX ("US EPA"), and DTSC have all  
4 reviewed the Site and have concluded that the Site has not impacted groundwater. During  
5 closure of the Site, tetrachloroethylene ("PCE"), trichloroethylene ("TCE"), and 1,1,1-  
6 trichloroethane ("TCA") contamination was found in the shallow soil in the southern part of the  
7 Site. The contaminated soil was remediated in accordance with the regulatory oversight of the  
8 DHS, RWQCB, and the South Coast Air Quality Management District ("SCAQMD"). Since  
9 Site closure in 1985, further examination of the Site has been conducted by the US EPA and the  
10 DTSC. In 1991, the US EPA evaluated the Site for potential environmental response actions and  
11 determined that the Site was not a threat to human health or the environment. Between 2000 and  
12 2005, DTSC requested further site investigation and soil testing, and ultimately concluded that  
13 the Site was not a threat to human health or groundwater.

14 Finally, even if soil contamination at the Site impacted groundwater at some point in  
15 time, there is no evidence that spills or releases of VOCs occurred during CMC's ownership and  
16 occupancy of the Site. CMC's ownership and occupancy of the Site began on October 3, 1983,  
17 and it ceased manufacturing operations approximately seven months later on May 11, 1984. Site  
18 closure was approved by DHS on April 16, 1985, and CMC's ownership and occupancy of the  
19 Site ended on May 17, 1985. All reliable evidence indicates that TCA was the only VOC at  
20 issue in this matter used at the Site during CMC's short time at the Site. There is no evidence  
21 that CMC spilled or released TCA at the Site during its ownership and occupancy of the Site.

22 For all of the reasons stated in this Brief and in the Defendants' Closing Trial Brief on  
23 Common Issues, CMC respectfully requests that this Court find in favor of CMC on the  
24 District's first, second, and sixth causes of action.  
25  
26  
27  
28

1 **II. [PROPOSED] FINDINGS OF FACT REGARDING SITE HISTORY AND**  
2 **ENVIRONMENTAL INVESTIGATIONS**

3 **A. Ownership and Operational History of 2100 East Orangethorpe**

4 On August 26, 1991, Coltec Industries Inc provided a summary of the ownership and  
5 operation history of the former Trent Tube facility located at 2100 East Orangethorpe Avenue,  
6 Fullerton, California to Ecology and Environment, Inc. (Ex. 11815), who at that time was  
7 preparing a RCRA Preliminary Assessment of the Site on behalf of the US EPA (Ex. 11816).  
8 Certain key events of this summary are reported below.

9 In the late 1950's, the Trent Tube Company purchased two adjoining parcels of real  
10 property on Orangethorpe Avenue in Fullerton, California. (Ex.11815-1). One parcel was  
11 recorded on March 18, 1957 and the other recorded on July 8, 1959. (Ex. 11815-1). The  
12 Fullerton facility was constructed shortly thereafter. (Ex. 11815-1).

13 In March 1963, the Trent Tube Company was merged into its parent corporation,  
14 Crucible Steel Corporation. (Ex. 11815-1). At that time, the Fullerton facility was engaged in  
15 producing electricweld, stainless, high alloy and titanium pipe and tubing. (Ex. 11815-2).  
16 Crucible Steel Corporation was acquired by Colt Industries Inc in 1968. (Ex. 11815-2).

17 On October 17, 1968, the Site was transferred to Cru Colt Corporation, a wholly-owned  
18 subsidiary of Crucible Steel Corporation. (Ex. 11815-2). The corporate name of Cru Colt  
19 Corporation was changed to Crucible Steel Corporation on October 18, 1968 and to Crucible Inc  
20 on February 14, 1969, and to Colt Industries Operating Corp on December 31, 1982. (Ex.  
21 11815-2).

22 Crucible Materials Corporation was incorporated on September 12, 1983. (RJN, filed  
23 August 29, 2012). On October 3, 1983, Colt Industries Operating Corp transferred the Site to its  
24 wholly owned subsidiary, Crucible Materials Corporation. (Ex. 11815-2). On May 11, 1984,  
25 manufacturing operations at the Site ceased. (Ex. 11813-2). As of May 17, 1985, Crucible  
26 Materials Corporation transferred the Site to its parent corporation, Colt Industries Operating  
27 Corp. (Ex. 11815-2).  
28

1 In November 1985, Colt Industries Operating Corp sold the Site to Howard K. Barlow.  
2 (Ex. 11815-2). Shortly thereafter in late 1985, La Barron Investments purchased the Site. (Ex.  
3 11816-25). La Barron Investments has primarily used the Site for storage of recreational  
4 vehicles. (Ex. 11816-25; Ex. 11856:6).

5 **B. Evidence of VOCs Use at 2100 E Orangethorpe**

6 Trent Tube was in the business of conversion of large tubing into smaller tubing,  
7 primarily stainless steel tubing. (Murphy depo, 22:3-9). The reduced tubing was degreased with  
8 solvents. (Murphy, 30:24-31:14). The evidence indicates that in the 1964 through 1968 time  
9 frame the Trent Tube Co. stored TCE at the facility, was permitted to store and use PCE, and  
10 was permitted to use the facility's solvent degreaser. (Ex. 387A-1, 2; 4 and 5; Ex. 387B-1; Ex.  
11 387C-1). During the 1980 to 1984 time frame, the facility used TCA for solvent vapor  
12 degreasing, stored unused TCA and waste TCA on site, and shipped waste TCA offsite for  
13 reclamation. (Ex. 388A; Ex. 11810-1, 2-6, 13, 14, 21 and 22).

14 Harry Murphy was the Quality Control Manager from 1969 to 1985 at the Site. (Murphy  
15 depo, 21:22-22:2; 23:8-14). Mr. Murphy was not aware of any spills of solvent in the area of the  
16 former degreasing pit, in the solvent storage area, or in the waste solvent storage area. (Murphy  
17 depo, 72:16-73:4; 160:20-161:6; 109:8-16). Nor was Mr. Murphy aware of any spills of solvent  
18 during the transfer of drums to the impound area (Murphy depo, 110:3-6), any spills of solvent in  
19 the area of the outside reservoir tank (Murphy depo, 160:2-15), or any leaking of solvent in the  
20 pipes between the reservoir tank and the degreasing pit (Murphy depo, 160:16-19).

21 **C. Environmental Investigations at 2100 E. Orangethorpe**

22 **1. 1984/1985 Site Closure by DHS, RWQCB and SCAQMD**

23 On May 4, 1984, in a memorandum from the RWQCB to the DHS regarding the Trent  
24 Tube Closure Plan, the RWQCB stated: "We have, however, reviewed the plan and inspected  
25 the facility with respect to its impact on water quality. During the inspection, small areas of soil  
26 contaminated with waste oil were noted on the south side of the plant. Mr. Harry Murphy, Plant  
27 Manager, stated that soil in these areas will be removed to a depth of three feet during closure.  
28



1 This is not included in the closure plan. With the above exception, no problems were noted  
2 during the inspection or in our review of the closure plan as submitted.” (Ex. 11813-31).

3 On January 18, 1985, Calocerinos and Spina, on behalf of Trent Tube, submitted the  
4 results of its Site assessment activities and proposed remediation plan for the Site to the DHS.  
5 (Ex. 11813-72-78; Ex. 392 for completeness).

6 Soil samples were collected at 17 locations as part of Site assessment in late December  
7 1984. (Ex. 11813-72; Ex. 11813-68 (figure); Ex. 409-80 (figure)). The A series, B series, C  
8 Series, and D Series sampling were conducted at 14 locations, and the soil was tested at depths  
9 of 3.5 feet, 5 feet and 10.5 feet. (Ex. 11813-72). The E series sampling was conducted at 3  
10 background locations, and the soil was tested at depths of 2 feet, 4 feet and 6 feet. (Ex. 11813-  
11 72). The only soil contamination found above the allowable limit of 1 mg/kg (parts per million)  
12 was found at A-1 at 3.5 feet (TCA – 1.2 ppm; PCE – 1.1 ppm) and 10.5 feet (TCA – 1.5 ppm;  
13 PCE – 1.7 ppm), C-3 at 3.5 feet (TCA – 2.2 ppm; PCE – 5.3 ppm), and D-2 at 3.5 feet (TCA –  
14 780 ppm; PCE – 21 ppm; TCE – 70 ppm). (Ex. 11813-73, 77-78).

15 The analytical results from the boring samples confirmed the presence of VOC  
16 contamination at low levels near the rear of the Trent Tube building and VOC contamination at a  
17 higher level near the back fence of the Trent Tube property adjacent to Vista Paint’s solvent  
18 storage area. (Ex. 11813-8). Calocerinos and Spina proposed further remedial action, including  
19 excavation and transport off-site for disposal of contaminated soils in the vicinity of D-2 to a  
20 depth of 4.5 feet (“Area A”) (Ex. 11813-75).

21 On February 11, 1985, 4 truckloads (57 cubic yards) of contaminated soil was excavated  
22 and transported off-site for disposal, pursuant to an Excavation Permit Narrative submitted to the  
23 SCAQMD. (Ex. 11813-9, 91-95, 104-108). On February 25, 26, and 27, 1985, 16 additional  
24 truckloads of contaminated soil was excavated and transported off-site for disposal. (Ex. 11813-  
25 10, 111-128). Soils from “Area B” at the Site, outside of the extended “Area A”, were removed  
26 to the designated area east of the building and spread in a thin layer for aeration. (Ex. 11813-10).  
27 On February 28, 1985, 16 truckloads of clean fill material were backfilled into the excavated  
28

1 hole and compacted. (Ex. 11813-10). On March 1, 1985, the aerated soil was removed from the  
2 aeration area and placed back in the excavation on top of the clean fill material. (Ex. 11813-10).

3 In March 1985, Calocerinos and Spina prepared and submitted a Facilities Closure  
4 Report to the DHS. (Ex. 11813). The Facilities Closure Report set forth a detailed description of  
5 Site closure activities, Site assessment, and Site remediation activities. (Ex. 11813). On April  
6 16, 1985, DHS approved closure of the Site. (Ex. 11816-5, 12). In September 1986, the DHS  
7 conducted a post-closure inspection of the Site. (Ex. 11816-5, 12).

## 8 **2. 1991 Site Review by US EPA**

9 Ecology and Environment, Inc. was retained by the US EPA to prepare a RCRA  
10 Preliminary Assessment of the former Trent Tube Site, which was submitted on September 15,  
11 1991. (Ex. 11816). The RCRA Preliminary Assessment was prepared as part of the US EPA's  
12 Environmental Priorities Initiative program in order to set priorities for cleanup of the most  
13 environmentally significant properties. (Ex. 11816-2). The RCRA Preliminary Assessment  
14 noted that no release of contaminants to the groundwater had been documented at the Site. (Ex.  
15 11816-9). The RCRA Preliminary Assessment also noted that the National Contingency Plan  
16 authorized the US EPA to consider emergency response actions at those sites which pose an  
17 imminent threat to human health or the environment, and concluded there was no apparent need  
18 for a referral of the Site to US EPA's Emergency Response Section because all the known wastes  
19 had been removed from the Site. (Ex. 11816-10).

## 20 **3. 2000-2005 Site Investigation and Closure by DTSC**

21 In May 2000, the DTSC prepared a RCRA Facility Assessment for the former Trent Tube  
22 Site. (Ex. 397-18). The purpose of the RCRA Facility Assessment was to evaluate whether  
23 Trent Tube contributed to groundwater contamination, and whether soil residues were still  
24 contributing to groundwater. (Ex. 397-18). A groundwater investigation was recommended only  
25 if soil-vapor tests and/or soil analysis indicated the presence of VOC's in facility soils. (Ex.  
26 397-18). On June 28, 2000, the DTSC transmitted the RCRA Facility Assessment for the Trent  
27 Tube Site to, among others, Trent Tube, La Barron Investments, Crucible Materials Corporation,  
28 US EPA, RWQCB, and the District. (Ex. 11852).

1 On December 27, 2001, the DTSC transmitted a Draft Corrective Action Consent  
2 Agreement for La Barron Investments regarding the former Trent Tube Site to, among others, La  
3 Barron Investments, RWQCB, and US EPA. (Ex. 11853). On June 12, 2002, the DTSC issued  
4 an Enforcement Order For Corrective Action to the owner of the former Trent Tube Site, La  
5 Barron Investments, copies of which were provided to RWQCB and US EPA. (Ex. 398).

6 On August 30, 2002, Frey Environmental prepared a RCRA Facility Investigation  
7 Workplan for the Site on behalf of La Barron Investments. (Ex. 11856). On October 4, 2002,  
8 Paul Carpenter, a certified hydrogeologist and engineering geologist in the Geologic Services  
9 Unit of the DTSC, drafted a memorandum containing his comments and recommendations after  
10 review of the RCRA Facility Investigation Workplan. (Ex. 11857).

11 On December 24, 2002, Frey Environmental submitted to the DTSC its Soil and Soil  
12 Vapor Assessment of the former Trent Tube Site performed on behalf of La Barron Investments.  
13 (Ex. 399). The stated objective of the work was to assess the presence of VOC's and selected  
14 metals in soil and VOCs in soil vapor beneath the Site. (Ex. 399-9).

15 VOCs were not detected above the laboratory detection limits of 5 ug/kg in soil samples  
16 from borings B1 through B4 and B18 through B20. (Ex. 399-18; Ex. 399-31 (figure)). The soil  
17 boring locations were agreed to by the DTSC. (Ex. 399-10). The B1 samples were collected at a  
18 depth of 2 feet, 10 feet, and 20 feet north of the former degreasing tank. (Ex. 399-24). The B2  
19 samples were collected at a depth of 1 feet and 10 feet east of the former degreasing tank. (Ex.  
20 399-24). The B3 samples were collected at a depth of 1 feet and 10 feet south of the former  
21 degreasing tank. (Ex. 399-24). The B4 samples were collected at a depth of 1 feet and 10 feet  
22 west of the former degreasing tank. (Ex. 399-24). The B18 sample was collected at a depth of 3  
23 feet as a background sample on the northwestern portion of the Site. (Ex. 399-24). The B19  
24 sample was collected at a depth of 3 feet as a background sample on the northeastern portion of  
25 the Site. (Ex. 399-25). The B20 sample was collected at a depth of 3 feet as a background  
26 sample on the southeastern portion of the Site. (Ex. 399-25).

27 Soil vapor sampling for VOCs was conducted at B1 and SV1 through SV8. (Ex. 399-16;  
28 Ex. 399-31 (figure)). The soil vapor sampling locations were agreed to by the DTSC. (Ex. 399-

1 10). The B1 samples were collected at a depth of 10 feet and 20 feet north of the former  
2 degreasing tank. (Ex. 399-23). The SV1 through SV4 samples were collected at a depth of 5  
3 feet near the former waste storage area. (Ex. 399-23). The SV5 through SV8 samples were  
4 collected at a depth of 5 feet near the southern property line. (Ex. 399-23). Frey Environmental  
5 concluded that relatively low concentrations of VOC's were detected in the soil vapor samples,  
6 with the exception of SV8 which was non-detect. (Ex. 399-18, 19 and 23).

7 On January 15, 2003, DTSC's staff certified hydrogeologist, drafted a memorandum  
8 containing his comments and recommendations after review of the Soil and Soil Vapor  
9 Assessment. (Ex. 11860). On March 20, 2003, the DTSC transmitted correspondence to La  
10 Barron Investments regarding its comments and request for an amendment to the RCRA Facility  
11 Investigation Workplan. (Ex. 11862).

12 On April 25, 2003, Frey Environmental submitted to the DSTC its addendum to the  
13 RCRA Facility Investigation Workplan to address the further assessment of VOC's previously  
14 detected beneath the Site. (Ex. 11863). On May 8, 2003, DTSC's staff certified hydrogeologist,  
15 drafted a memorandum containing his additional comments and recommendations after review  
16 of the RCRA Facility Investigation Workplan Addendum. (Ex. 11864). On May 19, 2003, Frey  
17 Environmental submitted to the DSTC its response to the May 8, 2003 comments from DTSC.  
18 (Ex. 11865).

19 On July 23, 2003, Frey Environmental submitted to the DTSC its Additional Soil Vapor  
20 Assessment of the former Trent Tube Site performed on behalf of La Barron Investments. (Ex.  
21 400). The stated objective of the work was to assess the lateral and vertical extent of VOC's in  
22 soil vapor beneath the Site. (Ex. 400-10). Soil vapor sampling for VOCs was conducted at SV9  
23 through SV20. (Ex. 400-10; Trial Ex. 400-29 (figure)). The soil vapor sampling locations were  
24 agreed to by the DTSC. (Ex. 400-10). Soil vapor samples were collected at 5 feet at SV9  
25 through SV13 to laterally assess contamination of VOC's previously detected at SV1 through  
26 SV7. (Ex. 400-11). Soil vapor samples were collected at depths of 10, 20, and 30 feet at SV14  
27 and SV15 to vertically assess contamination of VOC's previously detected at SV1 and SV3.  
28 (Ex. 400-11). Soil vapor samples were collected at a depth of 40 feet at SV16 to vertically assess

1 contamination of VOC's previously detected at B1. (Ex. 400-11). Soil vapor samples were  
2 collected at depths of 10, 20, and 40 feet at SV17 through SV20 to laterally and vertically assess  
3 contamination of VOC's previously detected at B1. (Ex. 400-11). The soil vapor sample at  
4 SV15 at 30 feet was non-detect for VOCs. (Ex. 400-25). The soil vapor samples at SV16  
5 through SV20 at 40 feet were non-detect for VOCs. (Ex. 400-25). Frey Environmental  
6 concluded that the lateral and vertical extent of VOC's had been adequately assessed. (Ex. 400-  
7 15). Frey Environmental recommended that no further action be required for the Site because  
8 "the low concentrations of VOCs where present beneath the Site, do not present a threat to  
9 human health or groundwater beneath the Site." (Ex. 400-16).

10 On August 19, 2003, Kimiko Klein, a staff toxicologist in the Human and Ecological  
11 Risk Division of the DTSC, drafted a memorandum containing comments and conclusions after  
12 review of the July 23, 2003, Additional Soil Vapor Assessment. (Ex. 11867). On September 9,  
13 2003, the DTSC transmitted correspondence to La Barron Investments regarding its comments  
14 and request a revised RCRA Facility Investigation Report to address prior comments of the  
15 Human and Ecological Risk Division of the DTSC. (Ex. 11862).

16 On October 8, 2003, Frey Environmental submitted to the DTSC its Revised Additional  
17 Soil Vapor Assessment of the former Trent Tube Site performed on behalf of La Barron  
18 Investments. (Ex. 11869). Frey Environmental again recommended that no further action be  
19 required for the Site because "the low concentrations of VOCs where present beneath the Site, do  
20 not present a threat to human health or groundwater beneath the Site." (Ex. 11869-16).

21 On July 8, 2005, the DTSC approved the Revised RCRA Facility Investigation Report for  
22 the Site, which concluded no further investigation was necessary. (Ex. 401).

23 **4. 2011 Soil & Groundwater Investigation by District's Counsel's**  
24 **Consultant**

25 All of the preceding investigation and sampling events were conducted according to  
26 and/or in support of submissions to the regulatory agencies. The sampling on which Dr. Waddell  
27 bases his opinions, however, was performed solely for purposes of this litigation. Environmental  
28 Support Technologies performed soil and groundwater sampling for District's counsel, Miller,

1 Axline & Sawyer, regarding the Crucible Site and the Vista Paint Site in early 2011. (Ex. 406-1)  
2 The sampling was not conducted at the Crucible Site, but rather at 1850 East Orangethorpe, 2020  
3 East Orangethorpe, and 2230 East Orangethorpe. (Ex. 406-1). The District's expert Dr. Waddell  
4 recommended the locations of the sampling. (RT 5/17/12, 3005:7-11).

5 Sampling points CM-GW01/01A were at Pete's Road Service, 2230 East Orangethorpe,  
6 located approximately 400 feet east of the center of the building on the Site. (Ex. 406-1, 7, and  
7 9). Sampling points CM-GW02/02A were on the Vista Paint Site, 2020 E. Orangethorpe,  
8 located on the center portion of the property between the Vista Paint building and the former  
9 Crucible building. (Ex. 406-1, 7, and 9). Sampling point CM-GW03 was on the Vista Paint Site,  
10 2020 E. Orangethorpe, located on the southern portion of the property between the Vista Paint  
11 building and the former Crucible building. (Ex. 406-1, 7, and 9). Sampling point CM-GW03A  
12 was on the Vista Paint Site, 2020 E. Orangethorpe, located south of the former Crucible building  
13 in the chemical drum storage area of the Vista Paint Site. (Ex. 406-1, 7, and 9). Sampling points  
14 CM-GW04/04A were at Liquidation Service, 1850 East Orangethorpe, located approximately  
15 400 feet east of the eastern portion of the building on the Vista Paint Site. (Ex. 406-1, 7, and 9).

16 The soil sampling results at CM-GW01, CM-GW02, CM-GW03, CM-GW04 were  
17 primarily non-detect for VOCs throughout the soil column except for at depths located in or  
18 immediately adjacent to perched groundwater. (Ex. 406-7; Ex. 10147-230). Perched  
19 groundwater was encountered at CM-GW01, CM-GW02, CM-GW03, CM-GW04 at levels  
20 between 80 and 72 feet below the ground surface, where VOCs were detected in the perched  
21 groundwater. (Ex. 10147-230). Shallow groundwater was encountered at CM-GW01A, CM-  
22 GW02A, CM-GW03A, CM-GW04A at levels between 124 and 123 feet below the ground  
23 surface, where all VOCs encountered were either non-detect or below their respective maximum  
24 contaminant level ("MCL") or notification level. (Ex. 10147-230).

1 **III. ADDITIONAL [PROPOSED] FINDINGS OF FACT AND ARGUMENTS IN**  
2 **SUPPORT OF JUDGMENT IN FAVOR OF CMC ON THE DISTRICT'S FIRST,**  
3 **SECOND, AND SIXTH CAUSES OF ACTION**

4 The District's case against CMC on the issue whether VOCs from 2100 E. Orangethorpe  
5 impacted groundwater relies principally upon the testimony of its hydrogeology expert Dr.  
6 Waddell. Dr. Waddell, however, lacked sufficient experience and groundwater data to support a  
7 credible opinion that the 2100 E. Orangethorpe Site has contaminated the groundwater.  
8 Moreover, Dr. Waddell failed to rebut strong evidence that the adjacent Vista Paint Site is the  
9 source of the groundwater contamination.

10 Throughout his testimony, Dr. Waddell seemed unable to testify without leading  
11 questions from the District's counsel and reliance on PowerPoint presentations and  
12 "demonstrative" exhibits contained therein. The Court admonished the District's counsel several  
13 times during the trial that the excessive use of leading questions would affect Dr. Waddell's  
14 credibility with the Court. (RT 5/7/12, 2327:19-2328:2). Too often, it appeared that the  
15 District's counsel, rather than Dr. Waddell, was actually testifying. The manner in which Dr.  
16 Waddell's testimony was presented reflects that he lacked the expertise and data necessary to  
17 support his opinions.

18 Dr. Waddell offered opinions that the VOCs in the soil at the Site have the ability to serve  
19 as a continuing source to groundwater at the Site. (RT 4/26/12, 1609:22-25). Dr. Waddell's  
20 opinion was not, however, based on experience in evaluating sites for soil contamination. Dr.  
21 Waddell has never conducted an evaluation of a client-owned site to determine whether the site  
22 was contaminated. (RT 5/17/12, 3032:1-3032:5). Dr. Waddell has never provided a client  
23 advice on the meaning of a non-detect in a soil sample. (RT 5/17/12, 3032:16-3032:19). Dr.  
24 Waddell has never performed, supervised, or directed tests to identify the presence of dense  
25 nonaqueous phase liquid ("DNAPL"). (RT 5/17/12, 3032:23-3033:1). Dr. Waddell is not aware  
26 if there is a standard practice in the environmental consulting community that is used to delineate  
27 the extent of contamination in soil. (RT 5/17/12, 3033:17-3033:21).

1           **A. The One-Time Groundwater Grab Samples Taken in Early 2011 Are Not**  
2           **Reliable for Determining Whether 2100 E. Orangethorpe Has Impacted**  
3           **Groundwater**

4           CMC's expert, Dr. Kopania, opined that the four testing locations from early 2011 where  
5 one time groundwater grab samples were collected represent screening data, but, as opposed to  
6 the use of monitoring wells, is unreliable for purposes of adequately determining whether a site  
7 has impacted groundwater. (RT 8/13/12, 6756:11-14). Dr. Waddell and Northrop's Expert Mr.  
8 Tofani also concurred in Dr. Kopania's opinion. This opinion is based on a variety of reasons:

- 9           • They are nothing more than a snapshot in time of groundwater conditions at a site;  
10           (RT 4/9/12, 656:6-656:8; RT 4/12/12, 815:22-816:6)
- 11           • They are not reproducible; (RT 8/13/12, 6771:12-19)
- 12           • They are not indicative of past groundwater conditions or trends; (RT 8/13/12,  
13           6772:17-22)
- 14           • They do not measure groundwater levels and flow at a site over time; (RT,  
15           5/17/12 3016:18-21; RT, 7/27/12; 5361:21024)
- 16           • They do not measure horizontal and vertical conditions at a site; (RT 5/17/12,  
17           3016:22-26; RT 7/27/12, 5361:25-5362:2)
- 18           • They serve merely as a screening tool; and (RT 7/27/12, 5362:3-7)
- 19           • They are not accepted by California regulatory agencies as the sole method for  
20           determining whether a site has in fact impacted groundwater. (RT 8/13/12,  
21           6772:10-16; RT 7/27/12, 5362:8-13).

22           Dr. Waddell lack of experience was further evident when he admitted that he didn't even  
23 know if regulatory agencies in California would accept one time grab samples as opposed to  
24 monitoring wells for purposes of site characterization. (RT 5/17/12, 3017:4-9).

25           Since the District filed its claim against CMC in November 2005, it has had over six  
26 years to install at least one or more groundwater monitoring wells at the Site in an effort to  
27 adequately characterize whether in its view the Site has impacted or threatens groundwater with  
28 VOC contamination, but has chosen not to do so. Rather, the District relies on four one-time



1 groundwater grab samples, none of which were located on the Site, to try to establish liability  
2 against CMC. (Ex. 406-1). Accordingly, these one-time samples are inadequate to support a  
3 claim that there is a connection between the Site and downgradient groundwater contamination.

4 **B. There Is No Evidence Concerning Spills or Releases of VOCs During CMC's**  
5 **Ownership and Occupancy of 2100 E. Orangethorpe**

6 The record is devoid of evidence describing when, how, or what quantity of solvents  
7 were spilled at the Site. The only evidence that spills or releases of VOCs occurred at the Site  
8 was the presence of limited areas of VOC-contaminated soil, which CMC removed from the  
9 property. The presence of some soil contamination at the Site, however, does not prove that any  
10 of the VOCs were released during CMC's ownership and occupancy.

11 CMC's ownership and occupancy began when the Site was transferred to CMC on  
12 October 3, 1983. (Ex. 11815-2). CMC ceased manufacturing operations approximately seven  
13 months later on May 11, 1984. (Ex. 11813-2). CMC's ownership and occupancy of the Site  
14 ended on May 17, 1985. (Ex. 11815-2). During this time period, CMC used TCA in a degreaser  
15 unit having a maximum capacity of 2400 gallons, and waste TCA was contained in a maximum  
16 of 15 55 gallon drums was present at the Site. (Ex. 11811-3). After manufacturing ceased, on  
17 May 23, 1984, 3,000 gallons of TCA and oils from the former Site were disposed off-site, and on  
18 May 30, 1984, 145 gallons of TCA and oils from the Site were disposed off-site. (Ex. 11813-6).  
19 Site closure was approved by DHS on April 16, 1985. (Ex. 11816-5, 12).

20 There is no evidence that solvents were released to the Site during CMC's ownership and  
21 operation. Consequently, Dr. Waddell admitted that he did not have an opinion as to whether  
22 any solvents released at the Site between October 1983 and May 1984 have affected  
23 groundwater. (RT 5/17/12, 3017:4-9.)

24 **C. No Regulatory Agency That Has Reviewed 2100 E. Orangethorpe Has**  
25 **Concluded 2100 E. Orangethorpe Impacted Groundwater**

26 Four state or federal environmental regulatory agencies, the DHS, RWQCB, US EPA,  
27 and DTSC, have reviewed the Site, and not one of them has concluded that the Site has impacted  
28 groundwater. In fact, after reviewing the Site's history of solvent use, the Site investigation

1 activities, and all of the relevant soil and soil gas data, no regulatory agency has recommended or  
2 requested any further remediation activities such as soil vapor extraction be undertaken, let alone  
3 any groundwater investigation. Dr. Waddell admitted that none of the regulatory agencies that  
4 reviewed the Site, required a groundwater investigation at the Site. (RT, 5/17/12 3026:13-18). In  
5 contrast, Dr. Waddell, who lacks experience in evaluating sites for possible soil contamination, is  
6 the only person of record claiming the Site has impacted groundwater.

7 Moreover, Dr. Waddell's opinion regarding the results of the RCRA Facility  
8 Investigation conducted under the oversight of the DTSC in 2000-2005 is misleading and not  
9 supported by the facts. Preliminarily, Dr. Waddell is incorrect in stating that Crucible conducted  
10 the RCRA Facility Investigation. (RT 4/26/12, 1601:9-18). The investigation was conducted by  
11 the owner of the Site at the time La Barron Investments. (Ex. 11856). Dr. Waddell opined that  
12 the DTSC concluded that the VOCs remaining in soil did not pose a risk to people from exposure  
13 to gasses, but that the DTSC did not review whether the Site was contaminating groundwater.  
14 (RT 4/26/12, 1601:9-1602:16). The second half of his opinion is incorrect. The Soil and Soil  
15 Vapor Assessment reports submitted to the DTSC by Frey Environmental were reviewed by a  
16 staff Certified Hydrogeologist in the Geologic Services Unit of the DTSC. (See Ex. 11860,  
17 11864). The October 7, 2003 Revised Additional Soil Vapor Assessment from Frey  
18 Environmental recommended that no further action be required for the Site because "the low  
19 concentrations of VOCs where present beneath the Site, do not present a threat to human health  
20 or groundwater beneath the Site." (Ex. 11869-16). In response, the DTSC approved the Revised  
21 RCRA Facility Investigation Report for the Site, which concluded no further investigation was  
22 necessary. (Ex. 401).

23 **D. All Soil and Soil Data at 2100 E. Orangethorpe Show at Most Minimal**  
24 **Impacts Contained to the Shallow Soil**

25 Dr. Waddell offered opinions that the VOCs in the soil at the Site have the ability to serve  
26 as a continuing source to groundwater at the Site. (RT 4/26/12, 1609:22-25). This opinion is not  
27 supported by the available soil and soil gas data generated at the Site, which shows only residual  
28 VOC contamination in the shallow soil without a connection to groundwater. Dr. Kopania,

1 opined that there is no evidence VOC releases from the Site have impacted groundwater. (RT  
2 8/13/12, 6755:22-24). Unlike Dr. Waddell, Dr. Kopania is a registered Professional Geologist  
3 and Certified Hydrogeologist in California with many years of experience at hundreds of  
4 environmental contamination sites. (RT 4/26/12, 6752: 7-6754:15; Ex. 27000).

5 The primary reason for Dr. Kopania's opinion is that the soil and soil gas data from the  
6 Site do not show any connection between VOCs in the shallow soil and the underlying  
7 groundwater. (RT 8/13/12, 6756:4-6). Dr. Kopania reviewed the 1984 soil data from the Site  
8 and found that the concentrations are not representative of DNAPL at the Site, and the presence  
9 of VOCs is limited and does not extend to depth. (RT 8/13/12, 6757:5-15). In addition, soil  
10 excavation occurred on the south part of the Site, south of the building to remove the VOCs  
11 detected in the shallow soils. (RT 8/13/12, 6762:21-6763:2). Lastly, DHS issued a closure for  
12 the Site. (RT 8/13/12, 6762:14-20).

13 Later, DTSC conducted a RCRA Facility Assessment to evaluate the potential for VOCs  
14 from the Site to have impacted groundwater. (RT 8/13/12, 6763:14-18). Dr. Kopania reviewed  
15 the soil data from 2002, which does not indicate the presence of VOCs in the shallow soil. (RT  
16 8/13/12, 6763:19-23). Dr. Kopania reviewed the soil gas data from 2002, which was consistent  
17 with a shallow release of VOCs, but not a deep migration of those VOCs, and the concentrations  
18 were not consistent with the presence of a DNAPL or a residual large mass of VOC  
19 contamination in the soil. (RT 8/13/12, 6765:22-6766:2). Dr. Kopania reviewed the soil gas data  
20 from 2003, which was consistent with the 2002 data in that there were only shallow relatively  
21 low VOC concentrations and no consistent detections deeper to groundwater. (RT 8/13/12,  
22 6766:19-24).

23 Dr. Kopania opined that the soil and soil gas data at the Site are not consistent with a  
24 presence of a larger residual mass or DNAPL at the Site, and that there are no consistent  
25 detections between the shallow soil and perched groundwater. (RT 8/13/12, 6768:19-6769:5).  
26 Also, Dr. Kopania opined that there is no sampling data between the perched zone and the  
27 shallow aquifer. (RT 8/13/12, 6791:26-6792:4).

1 Dr. Waddell acknowledged that the SV16, SV17, SV118, SV19 and SV20 soil vapor  
2 sampling points encircle the former degreaser on the Site. (RT 5/17/12, 3001:1-6).  
3 SV18 is the western most soil vapor sampling point from the degreaser on the Site. (RT 5/17/12  
4 3001:7-10). Dr. Waddell further acknowledged that SV16, SV17, SV118, SV19 and SV20 are  
5 the deepest soil gas sampling points at the Site at 40 feet below ground surface, and they were all  
6 non-detect for TCE, PCE, 1,1-dichloroethane ("1,1-DCE"), and TCA. (RT, 5/17/12 3001:20-  
7 3002:6). Once again, the data regarding non-detects in shallow soil runs contrary to Dr.  
8 Waddell's opinions that soil contamination at the Site is impacting groundwater.

9 Dr. Waddell opined that the VOC detections in soil at CMGW-01 at 70 feet, at CMGW-  
10 02 at 60 and 70 feet, at CMGW-03 and 70 and 80 feet, and CMGW-04 at 80 feet were affected  
11 by the VOC contamination found in the perched groundwater at those depths. (RT, 5/17/12  
12 3003:3-3005:1). Accordingly, Dr. Waddell acknowledged that at least based on the available  
13 data, VOC contamination is not from conditions in shallow soil at that those locations, but rather  
14 from the perched water, which again runs contrary to Dr. Waddell's opinions that soil  
15 contamination at the Site is impacting groundwater.

16 **E. The Vista Paint Site Is a Source of Contamination Found in Soil and**  
17 **Groundwater**

18 The Vista Paint Site is a site that Dr. Waddell reviewed in preparing his expert report and  
19 opinions. (RT 5/17/12, 2991:6-8). Dr. Waddell agreed that information in depositions or  
20 discovery responses that referenced types of solvents used, volumes of solvents used, and  
21 locations of solvent use, and references to spills is the type of information, when available, that  
22 he relied in preparing his opinions in this matter. (RT 5/17/12, 2990:25-2991:5). Dr. Waddell  
23 admitted that his expert report regarding the Vista Paint Site contained no references to discovery  
24 responses from Vista Paint, documents from Vista Paint or depositions of Vista Paint employees.  
25 (RT 5/17/12, 2991:13-2992:16).  
26  
27  
28

1 Evidence admitted in this matter regarding Vista Paint that could have been provided by  
2 the District to Dr. Waddell includes, in part, the following<sup>1</sup> regarding Vista Paint's use of a large  
3 quantity of TCA in the early 1990s. John Long testified that Vista Paint used approximately  
4 6,000 pounds of TCA annually (400-500 gallons) between 1989-1993 as a paint additive. (Ex.  
5 23755 at p. 12 (Long Depo. at 28:6-18); p.16 (Long Depo. at 32:18-22); p. 11 (Long Depo. at  
6 27:12-17), p. 12 (Long Depo. at 28:6-14).) A 1990 physical inventory reflects that Vista Paint  
7 stored 5,848 pounds of TCA on-site. (Ex. 11369-1.) A November 15, 1991 chemical inventory  
8 list reflects 385 gallons of TCA located "outside building southeast of drum lot." (Ex. 11371-6.)  
9 Long further testified that Vista Paint stored its TCA in an open area without a cover. (Ex.  
10 23755, 40:8-13.)

11 Accordingly, because the District did not provide evidence regarding the use of TCA by  
12 Vista Paint to Dr. Waddell in preparation for forming his opinions, it diminishes the credibility  
13 of his analysis of the Vista Paint Site and his ultimate opinions regarding CMC.

14 **1. Vista Paint is a Source of TCA Contamination and a Likely Source of**  
15 **PCE and TCE Contamination in Soil**

16 Dr. Waddell generally discounted or ignored the shallow soil vapor data on the Vista  
17 Paint Site as part of his expert analysis. Dr. Kopania, however, took into consideration Vista  
18 Paint's use of TCA. (RT 5/17/12, 6774:10-11; 6781:12-24). Vista Paint stored drums of solvent  
19 on its section of property south of the Crucible Site. (RT 4/26/12, 1595:25-1596:5; RT 8/13/12,  
20 6762:5-12; Ex. 409-80). Soil vapor sampling was conducted in 2009 in 12 locations outside of  
21 the Vista Paint building. (RT 5/17/12, 2993:22-2992:16; Ex. 72611-1-3; Ex 10154-41). Dr.  
22 Waddell opined that soil gas sampling results for TCA and DCE on the west side of the Vista  
23 Paint building suggest releases of TCA to the soil in the area of VP-11 and VP-12. (RT 5/17/12,  
24 2994:6-13, 2998:13-17; Ex. 10154-41; Ex. 72611 1-3). However, he did not make similar  
25 conclusions about the east side, closest to the former Crucible Site.

26  
27  
28 <sup>1</sup> The Defendants Closing Brief on Common Issues discusses the Vista Paint Site in even greater detail at  
53:27-54:9 and is hereby incorporated by reference.

1 On cross-examination, Dr. Waddell admitted he could not also rule out a release of TCA  
2 on the east side of the Vista Building based on the results of VP-4. (RT 5/17/12, 2998:18-26).  
3 Further, Dr. Waddell also acknowledged that the soil gas data at VP-4 for TCA, DCE, PCE and  
4 TCE increases at depth reaching 40 feet below ground surface. (RT 5/17/12, 2999:22-24). VP-4  
5 is the closest sampling point on the Vista Paint Site to the former degreaser on the Crucible Site.  
6 (RT 5/17/12, 3000:5-9). SV18 is the western most soil vapor sampling point from the degreaser  
7 on the Crucible Site. (RT 5/17/12, 3001:7-10). Unlike VP-4 at 40 feet, SV18 at the Crucible Site  
8 at 40 feet below ground surface was non-detect for TCE, PCE, DCE, and TCA. (RT, 5/17/12  
9 3001:20-3002:6).

10 Dr. Kopania opined that PCE was released at the Vista Paint Site based on soil gas data  
11 collected around the Vista Paint building in 2009. (RT 5/17/12, 6811:20). During rebuttal Dr.  
12 Waddell admitted that in his experience, even in the absence of a known use of a particular  
13 solvent at a site, the site could be a source of the solvent contamination based on detections in  
14 shallow soil. (RT 8/27/12, 7485:2-12). TCA, DCE, PCE and TCE are all found in shallow soil  
15 around the outside of the Vista Paint building based on the 2009 soil vapor sampling conducted  
16 at the Vista Paint Site. (Ex. 72611-1-3; Ex 10154-41).

17 **2. Groundwater Flow in the Perched Zone in the Vicinity of the Vista**  
18 **Paint Site and 2100 E. Orange Thorpe is from West to East,**  
19 **Implicating Vista Paint as the Likely Source of the VOC**  
20 **Groundwater Contamination in the Shallow Aquifer**

21 Dr. Kopania analyzed the one-time sampling data in order to be able to evaluate and  
22 respond to Dr. Waddell's opinions. (RT 8/13/12, 6772:23-6773:3). Perhaps the most significant  
23 error committed by Dr. Waddell concerning his opinions regarding the former Crucible Site was  
24 assuming that groundwater in the perched zone flowed from east to west as it does in the shallow  
25 aquifer.

26 Dr. Waddell opined that Vista Paint was the most likely source of the detection of 685  
27 ug/l for 1,4-Dioxane in CM-GW01 in the perched groundwater. (RT 4/26/12, 1612:16-1613:5).  
28 Dr. Kopania also opined that the 1,4-Dioxane found in the perched groundwater at CM-GW04 is

1 from Vista Paint Site. (RT 8/13/12, 6780:25-6781:1). In addition, Dr. Kopania agreed with Dr.  
2 Waddell's opinions based on the known use of 1,4-Dioxane at Vista Paint and that 1,4-Dioxane  
3 could have also been formed from the breakdown of ethylene glycol. (RT 8/13/12, 6781:2-8).  
4 However, Dr. Waddell prematurely concluded that Crucible was the source of the TCA, DCE,  
5 PCE, and TCE found in the perched groundwater in CM-GW01, CMGW02, CM-GW03 and  
6 CM-GW04.

7 Dr. Waddell considered CMGW-01/01A to be upgradient from the Crucible Site and  
8 CMGW-04/04A to be downgradient from the Vista Site. (RT 5/17/12, 3007:7-21). On cross-  
9 examination, Dr. Waddell acknowledged that the south side of the former Crucible Site was used  
10 by Vista Paint as a drum storage area. (RT, 5/17/12 3006:26-3007:22). As a result, Dr. Waddell  
11 changed his opinion from CMGW03/03A being upgradient of the Vista Paint to it being  
12 upgradient of the former Vista Paint building, but downgradient of the Vista Paint storage area.  
13 (RT 5/17/12, 3007:26-3008:6). Further, Dr. Waddell admitted that based on his opinion that the  
14 VOCs found in the perched groundwater at CMGW-01 was from the former Crucible Site that at  
15 least in the perched zone, groundwater flows east from CMGW-02 and CMGW-03 to CMGW-  
16 01 (RT 5/17/12, 3010:1-17).

17 Dr. Kopania opined that the flow direction in the perched zone is west to east based on  
18 his review of the water level data in the boring logs. (RT 8/13/12, 6774:11-14). Based on the  
19 2011 data groundwater data, which contained the depth at which water was stabilized at each of  
20 the temporary wells in the perched zone, and groundwater surface elevation, Dr. Kopania was  
21 able to determine that the groundwater elevations at the sample to the west at CM-GW-04 was  
22 higher than the samples to the east indicating a general flow direction toward the east. (RT  
23 8/13/12, 6782:7-25; Ex. 27013).

24 On rebuttal, Dr. Waddell agreed with Dr. Kopania's opinion that water in the perched  
25 zone flowed from west to east at the time of sampling in 2011. (RT 8/27/12, 7450:11-7451:3;  
26 7452:7-11). However, Dr. Waddell opined that the dominant direction of flow is from west to  
27 east. (RT 8/27/12, 7452:5-6; 7451:2-3). When challenged for the basis of that opinion, Dr.  
28 Waddell admitted he was not aware of any data in the vicinity of the Crucible and Vista Paint

1 sites other than the early 2011 one-time hydro punches concerning groundwater flow in the  
2 perched zone. (RT 8/27/12, 7484:23-7485:1).

3 Dr. Kopania opined that the VOC contamination found in the shallow aquifer is from the  
4 Vista Paint Site. (RT 8/13/12, 6774:1-3). 1,4-Dioxane is present in groundwater samples at a  
5 concentration that is higher than seen as a solvent stabilizer for TCA. (RT 8/13/12, 6774:6-9;  
6 6775:2-9; Ex. 27004; Ex. 27003; Ex. 27002; Ex. 20001). Dr. Kopania also analyzed the ratios of  
7 DCE contamination, which in his opinion demonstrated that the contamination at CM-GW02A  
8 and CM-GW03A in shallow groundwater is more similar to the sample from CM-GW04 in the  
9 perched zone than the samples immediately above CM-GW02A and CM-GW03A in the perched  
10 zone. (RT 8/13/12, 6774:15-20; 6786:26-6787:5; Ex. 27004; Ex. 27003; Ex. 27002).

11 **F. Downgradient Wells Do Not Indicate that 2100 E. Orangethorpe is the**  
12 **Source of VOC Contamination in the Shallow Aquifer**

13 Dr. Kopania opined that the VOC contamination observed under the Vista Paint and the  
14 former Crucible Site in the shallow aquifer has not migrated to downgradient wells. (RT 8/13/12,  
15 6792:5-12). Dr. Kopania bases his opinion on wells MW-23 and MW-24S. (RT 8/13/12,  
16 6792:13-162).

17 Dr. Kopania observed that MW-23 is not on the flow path from the Crucible Site, the  
18 chemistry at MW-23 is highly variable and the TCA is in proportions that indicate a nearby  
19 source other than the Crucible Site. (RT 8/13/12, 6792:17-25). Dr. Kopania evaluated the PCE  
20 plume from AC Products as a good-indicator of long-term groundwater flow in the area, and he  
21 noted that it goes right under the Crucible Site, but is passing to the north of MW-23. (RT  
22 8/13/12, 6794:3-26; Ex 408-7). Dr. Kopania also analyzed the data from MW-23 and plotted it  
23 on graphs. (RT 8/13/12, 6795:1-11; Ex. 27010; Ex 27005). Dr. Kopania found the data to be  
24 variable over time and not consistent with a long-term source, and the relatively high proportion  
25 of TCA in the 2000 period suggested a near or young source to MW-23. (RT 8/13/12, 6797:26-  
26 6798:16).

27 Dr. Kopania observed that the chemistry at MW-24S is variable over time and does not  
28 show a consistent contribution from any one source. (RT 8/13/12, 6800:1-3). Dr. Kopania



1 opined that the DCE concentration measured at MW-24S is greater than that measured adjacent  
2 to the Crucible Site, which indicates other sources. (RT 8/13/12, 6800:7-10) Dr. Kopania  
3 analyzed the data from MW-24S and plotted it on graphs. (RT 8/13/12, 6800:11-20; 6801:18-20;  
4 Ex. 27010; Ex 27006). Dr. Kopania found that the chemicals in MW-24S are not from the  
5 Crucible Site based on the relationships between the different patterns and the absolute  
6 concentrations, and which chemicals appear over time. (RT 8/13/12, 6802:20-6803:1)

7 Dr. Kopania concluded that the concentrations and presence of TCA in some of the  
8 downgradient wells and the concentrations and proportions of other VOCs indicate sources  
9 affecting those wells other than the Crucible Site. (RT 8/13/12, 6809:14-19). On rebuttal, Dr.  
10 Waddell agreed with Dr. Kopania's opinions that there was a lot of variability in the water  
11 samples from MW-23 and MW-24S and the proportions and concentrations of the various COCs.  
12 (RT 8/13/12, 7457:16-20).

13 While discussing upgradient sources of TCA relative to the EMD Site, Northrop expert  
14 Mr. Tofani testified that Dr. Waddell identified a source of TCA in the vicinity of the Crucible  
15 Site. (RT 7/26/12, 5327:10-21). Mr. Tofani testified that the District collected and analyzed  
16 groundwater samples in that area in 2011 and that they indicated the ongoing presence of TCA in  
17 the groundwater at that location. (RT 7/26/12, 5327:22-5328:3). However, on cross-examination,  
18 Mr. Tofani admitted that the four groundwater grab samples in the shallow aquifer from early  
19 2011 in the vicinity of the Crucible and Vista Sites were all non-detect for TCA. (RT 7/27/12,  
20 5360:15-17; 5361:6-9; Ex. 27009).

21 **G. VOC Groundwater Contamination From the AC Products' Site Flows Under**  
22 **2100 E. Orangethorpe**

23 On January 25, 2000, Harding Lawson Associates, on behalf of AC Products issued its  
24 Downgradient Investigation Report to the RWQCB. (Trial Ex. 408). Harding Lawson  
25 Associates concluded that the westerly groundwater flow direction for the AC Products' project  
26 monitoring well in December 1999 was consistent with previous monitoring events. (Trial Ex.  
27 408-3). On Plate 3, Harding Lawson Associates' drew a contour of PCE greater than 100 ug/l  
28 between S. State College Boulevard and S. Placentia Ave to the east of the former Crucible Site,

1 extending to the north of the former Crucible Site at E. Orangethorpe Avenue, extending south of  
2 the former Crucible Site to Carbon Creek, and extending west to S. Acacia Avenue. (Trial Ex.  
3 408-7). Harding Lawson Associates further concluded that the proposed extraction well (P-03)  
4 west of Manhattan Avenue was properly sited to capture VOCs in groundwater at the  
5 downgradient edge of the AC Products' plume. (Trial Ex. 408-4, 7).

6 Dr. Kopania opined that the PCE found in the shallow aquifer under the former Crucible  
7 Site is coming from AC Products. (RT 8/13/12, 6853:9-15). Dr. Waddell opined that some of the  
8 groundwater coming from under the Crucible Site has been treated by AC Products at its  
9 extraction well P-03. (RT 4/26/12, 1633:21-1634:2).

10 **H. There Is No Contamination From Under 2100 E. Orangethorpe That Meets**  
11 **the Remediation Objective for EW-4**

12 The District's extraction wells were designed to be located to capture areas of greatest  
13 future threat. (Ex. 708, Section 3-2). Thus, the project was designed to have extraction wells  
14 located and operated in capture areas where VOC concentrations exceeded ten times MCLs,  
15 except for EW-4, which was to be located in an area where VOC concentrations were greater  
16 than five times MCLs. (*Id.*; RT 2079:10-16).

17 Dr. Waddell in his expert report concluded that only EW-4 would capture groundwater  
18 potentially impacted by the 2100 E. Orangethorpe Site. (RT, 5/17/12 3029:11-18). Dr. Fogg's  
19 particle tracking map shows a hypothetical flow path of TCE from the 2100 E. Orangethorpe Site  
20 directly to EW-4. (Ex. 10000-43).

21 It is indisputable that EW-4 fails to meet its remediation objective with regard to any  
22 contamination arguably coming from the 2100 E. Orangethorpe Site. The groundwater results in  
23 CMGW-01A, CMGW-02A, CMGW-03A, and CMGW-04A were all non-detect for TCA, below  
24 5 parts per billion for PCE and TCE, below on average 6 parts per billion for DCE, and below  
25 the notification level for 1,4-Dioxane. (RT 5/17/12, 3014:18-3015:6-14; Ex. 10147-230).

26 Even if this Court were to find that CMC was responsible for the groundwater  
27 contamination under the 2100 E. Orangethorpe Site, the PCE, TCE, and DCE are all below the  
28 MCL and the 1,4-Dioxane is below the notification level. Thus, any contamination from CMC

1 would be below the District's stated goal of capturing VOC contamination of 5 times MCL at the  
2 downgradient extraction well, EW-4.

3           **I.       The District Has No Evidence of Groundwater Contamination Above the**  
4           **MCL Under 2100 E. Orangethorpe In 2005, 2008 and 2011**

5           The District brought its claims in 2005 against CMC without any evidence of releases of  
6 VOCs to the groundwater at the Site.

7           David Mark, the District's Project Manager for the North Basin Groundwater Protection  
8 Project (RT 5/3/12, 2006:21-24) prepared the District's 2008 Composite VOC Plume Map. (RT  
9 5/3/12, 2102:17-19). The Crucible Site is located in the District's 2008 Composite VOC Plume  
10 Map in a light blue plume, which the District contends represents an area where PCE, TCE, and  
11 1,1-DCE concentrations are in range of exceeding the MCL for drinking water up to 5 times the  
12 MCL. (Ex. 695-1). This depiction of this portion of the plume and the Crucible Site is pure  
13 speculation. Mr. Mark admitted that at the time he prepared the District's 2008 Composite VOC  
14 Plume Map, he did not have any groundwater data at or immediately adjacent to the Crucible  
15 Site. (RT 5/8/12, 2531:24-2532:2). Mr. Mark admitted that the nearest groundwater data where  
16 either TCE, PCE, or 1,1-DCE exceeded the MCL was approximately 2400 feet downgradient  
17 from the Crucible Site at MW-24S. (RT 5/8/12, 2532:2-21). Lastly, Mr. Mark admitted that at  
18 the time he prepared the District's 2008 Composite VOC Plume Map, he did not know whether  
19 or not the groundwater contamination under the Crucible Site was greater than the MCL for  
20 TCE, PCE, or 1,1-DCE. (RT. 5/8/12, 2531:24-2532:2).

21           In 2011, the District elected not to conduct a groundwater investigation under the  
22 Crucible Site, but rather at neighboring properties. Even considering these one time sampling  
23 results, the PCE, TCE, and DCE are all below the MCL and the 1,4-Dioxane is below the  
24 notification level.

25           At no time since 2005 to the present has the District furnished any evidence that is  
26 probative of the historical, ongoing, or current condition of groundwater quality underlying the  
27 Site. Without such evidence, Plaintiff's claims against CMC must fail.

1           **J.     Any Potential Allocation of Liability to CMC is *De Minimus***

2           Dr. Kopania, opined that there is no evidence VOC releases from the Site have impacted  
3 groundwater. (RT 8/13/12, 6755:22-24). If however, any liability should attach to CMC, it is at  
4 most *de minimus* and subject to allocation in a variety of ways as discussed in Defendants' Trial  
5 Brief on Common Issues.

6           Any potential allocation should reflect that the Site is not one of the 13 major impact sites  
7 determined by Dr. Waddell and identified in his plume map. (RT 5/17/12, 3030:1-11; Ex. 10146-  
8 53). Any contaminated groundwater flowing from the Site would be captured only by one of the  
9 District's six planned extraction wells, EW-4. (RT 5/17/12, 3029:11-18; Ex. 10000-43).

10          However, the PCE found in the shallow aquifer under the former Crucible Site is coming from  
11 AC Products (RT 8/13/12, 6853:9-15) and to the extent VOC releases from the Site may be  
12 impacting groundwater they would primarily be captured and treated by AC Products' extraction  
13 well P-03. (RT 4/26/12, 1633:21-1634:2). In addition, the 1,4-Dioxane is from Vista Paint. (RT  
14 4/26/12, 1612:16-1613:5; RT 8/13/12, 6780:25-6781:1). To the extent CMC has any liability for  
15 TCA, DCE, or TCE, such liability must be at least partly allocated to Vista Paint based upon Dr.  
16 Kopania's opinion regarding Vista Paint (RT 8/13/12, 6774:1-3) and the fact that two of the one-  
17 time groundwater sampling wells were located on Vista Paint's property (Ex. 406-1, 7, and 9).

18       **IV.    CONCLUSION**

19          In conclusion, the District's evidence failed to prove the essential elements of its first,  
20 second and sixth causes of action against CMC. Specifically, the District failed to present  
21 evidence establishing its prima facie case that the 2100 E. Orangethorpe Site or CMC's  
22 operations at the 2100 E. Orangethorpe Site caused or threatened to cause groundwater  
23 contamination or pollution which required the District to incur remediation or clean-up costs.  
24 For those reasons, and for all the reasons explained above, this Court finds in favor of CMC on  
25 the District's first, second and sixth causes of action.

26       **V.    [PROPOSED] CONCLUSIONS OF LAW**

27          CMC hereby incorporates by reference as if fully set forth herein the elements of each  
28 of Plaintiff's causes of action and the causation standard applicable to its claims as set forth

1 in the Defendants' Closing Trial Brief on Common Issues.

2 Based on the foregoing, the Court makes the following conclusions of law as follows:

3 1. CMC is entitled to judgment in its favor on the District's first, second and  
4 sixth causes of action.

5 2. In this phase of trial, the District seeks to recover from Defendants, including  
6 CMC, the costs actually incurred by the District in connection with the North Basin  
7 Groundwater Protection Project ("NBGPP"). The purpose of the NBGPP is to remediate  
8 groundwater in the North Basin that is contaminated with volatile organic compounds  
9 ("VOCs"), perchlorate, and nitrate.

10 3. At trial, the District, through its expert, alleged that CMC was responsible for  
11 releasing into groundwater the VOCs tetrachloroethylene ("PCE"), trichloroethylene  
12 ("TCE"), 1,4-Dioxane, 1,1,1-trichloroethane ("1,1,1-TCA"), the latter of which latter of  
13 which the District alleged degraded in groundwater into 1,1-dichloroethane ("1,1-DCE").  
14 The District further alleged that the District actually incurred costs in containing or cleaning  
15 up groundwater contamination caused by CMC.

16 4. Of the chemicals of concern listed above, the only one which the District  
17 proved by a preponderance of the evidence which was used during CMC's business  
18 operations at the 2100 E. Orangethorpe Site was 1,1,1-TCA.

19 5. The District failed to prove by a preponderance of the evidence that CMC  
20 released any chemical of concern at the 2100 E. Orangethorpe Site. The mere presence of  
21 soil contamination at the 2100 E. Orangethorpe Site found in the 1984 is not sufficient  
22 evidence that CMC caused soil contamination, or that this soil contamination impacted  
23 groundwater flowing under or from the Site. CMC owned and occupied the 2100 E.  
24 Orangethorpe Site from October 1983 until May 1985.

25 6. The District failed to prove by a preponderance of the evidence that soil  
26 contamination at the 2100 E. Orangethorpe Site has impacted groundwater. The District has  
27 not provided the Court with any groundwater data from the 2100 E. Orangethorpe Site. The  
28 only testing performed by the District relating to the 2100 E. Orangethorpe Site were off-site

1 one-time grab samples, which Dr. Waddell admitted are not useful in establishing the  
2 movement of solvent in groundwater. The Court finds that these one-time grab samples do  
3 not establish that the 2100 E. Orangethorpe Site impacted groundwater.

4 7. Even assuming that the 2100 E. Orangethorpe Site has impacted groundwater,  
5 the District has not incurred response costs as a result of any groundwater contamination  
6 from the 2100 E. Orangethorpe Site. Project manager David Mark testified that the goal of  
7 the NBGPP is to treat groundwater contaminant concentrations that are more than 5 times the  
8 maximum contaminant level ("MCL") or reporting level. Extraction well EW-4 is the  
9 Extraction Well drilled by the District which testimony established is directly downgradient  
10 of the 2100 E. Orangethorpe Site. There is no groundwater underlying the 2100 E.  
11 Orangethorpe Site or downgradient that exceeds the MCL by more than 5 times that will be  
12 captured by EW-4.

13 8. The District has not incurred any costs in containing threatened groundwater  
14 contamination from the 2100 E. Orangethorpe Site. The District has not undertaken soil  
15 remediation at the 2100 E. Orangethorpe Site.

16 9. Given the District's failure to prove it has incurred costs in cleaning up  
17 contamination or pollution caused by CMC, the District is not entitled to any contribution or  
18 indemnity from CMC toward the District's costs in connection with the NBGPP.  
19 The District is not entitled to declaratory relief against CMC.  
20

21 Respectfully submitted,

22 DATED: September 7, 2012

DONGELL LAWRENCE FINNEY LLP

23  
24  
25 By



Paul D. Rasmussen

Attorneys for Defendant and Cross-Defendant  
CRUCIBLE MATERIALS CORPORATION

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2 Docket No. 04CC00715

3 **PROOF OF SERVICE THROUGH LEXIS NEXIS FILE & SERVE**  
4

5 I, Desiree Caudillo, declare:

6 I am employed in the County of Los Angeles, State of California. I am over the  
7 age of 18 and not a party to the within action; my business address is 707 Wilshire Boulevard,  
8 45th Floor, Los Angeles, CA 90017-3609. On the date set forth below, I served a copy of the  
9 foregoing document(s) described as follows:

10  
11 **DEFENDANT CRUCIBLE MATERIALS CORPORATION'S CLOSING BRIEF AND**  
12 **[PROPOSED] FINDINGS OF FACTS AND CONCLUSIONS OF LAW**  
13

14 served by:

15 [ X ] Posting it directly on the Lexis Nexis File & Serve website,  
16 <https://fileandserve.lexisnexus.com> at approximately 4:30 p.m. local time.  
17

18 I declare under penalty of perjury under the laws of the United States of America  
19 that the foregoing is true and correct and that this declaration was executed on  
20 September 7, 2012 at Los Angeles, California.  
21

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24 Desiree Caudillo

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